

# Comparisons of Job Characteristics

**Focus Occupation:** Industrial Engineers (17-2112)

**Associated Occupation:** Engineering Technicians, Except Drafters, All Other (17-3029)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 92

**Focus Occupation:** Industrial Engineers (17-2112)

**Associated Occupation:** Engineering Technicians, Except Drafters, All Other (17-3029)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Engineering and Technology	5.7	17.6	18.0	0	Current knowledge level may be sufficient
Mathematics	9.2	16.6	15.6	0	Current knowledge level may be sufficient
Mechanical	6.8	16.6	15.6	0	Current knowledge level may be sufficient
Computers and Electronics	8.4	16.2	11.6	<<	Extensive education and/or training may be required
Design	5.2	15.1	14.8	0	Current knowledge level may be sufficient
Production and Processing	6.0	13.3	17.4	>>	Current knowledge level is likely more than sufficient
Physics	4.3	12.9	8.5	<<	Extensive education and/or training may be required
Telecommunications	3.9	7.4	3.5	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 46

**Focus Occupation:** Industrial Engineers (17-2112)

**Associated Occupation:** Engineering Technicians, Except Drafters, All Other (17-3029)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Operation Monitoring	6.6	12.1	6.5	<<	Extensive development of skills in this area may be required
Quality Control Analysis	5.9	11.5	5.0	<<	Extensive development of skills in this area may be required
Mathematics	6.2	10.8	10.3	0	Current skill level may be sufficient

Troubleshooting	4.5	10.6	4.1	<<	Extensive development of skills in this area may be required
Equipment Maintenance	3.5	10.4	1.0	<<	Extensive development of skills in this area may be required
Equipment Selection	3.3	9.4	1.6	<<	Extensive development of skills in this area may be required
Repairing	3.4	9.4	1.0	<<	Extensive development of skills in this area may be required
Technology Design	2.6	7.0	4.4	<<	Extensive development of skills in this area may be required
Installation	1.7	6.2	1.0	<<	Extensive development of skills in this area may be required
Programming	2.2	4.9	3.3	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 92			
Focus Occupation: Industrial Engineers (17-2112)					
Associated Occupation: Engineering Technicians, Except Drafters, All Other (17-3029)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Visualization	7.5	12.3	10.3	<	Some improvement in abilities may be required
Information Ordering	9.9	12.0	11.8	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	11.2	10.5	0	Current ability level may be sufficient
Flexibility of Closure	7.8	10.5	9.3	<	Some improvement in abilities may be required
Perceptual Speed	7.4	10.3	7.4	<<	Extensive improvement in abilities may be required
Number Facility	6.3	10.2	8.0	<	Some improvement in abilities may be required
Visual Color Discrimination	6.4	9.6	7.3	<<	Extensive improvement in abilities may be required
Memorization	5.6	7.5	5.6	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

There are no common work activities.

Tools and Technologies that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 77
Focus Occupation: Industrial Engineers (17-2112) Associated Occupation: Engineering Technicians, Except Drafters, All Other (17-3029)		
Tools and Technologies		Exclusivity

Business function specific software	1
Computer printers	2
Computers	1
Content authoring and editing software	1
Conveyors and accessories	18
Development software	4
Electrical measuring and testing equipment	7
Hydraulic presses	25
Indicating and recording instruments	2
Industry specific software	1
Integrated circuits	18
Laboratory environmental conditioning equipment	24
Laboratory furniture	90
Laboratory ovens and accessories	15
Length and thickness and distance measuring instruments	2
Light and wave generating and measuring equipment	4
Metals and metallurgy and structural materials testing instruments	15
Pressure measuring and control instruments	10
Sound generating and measuring equipment	19
Temperature and heat measuring instruments	6
Transducers	23
Viewing and observing instruments and accessories	4

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.